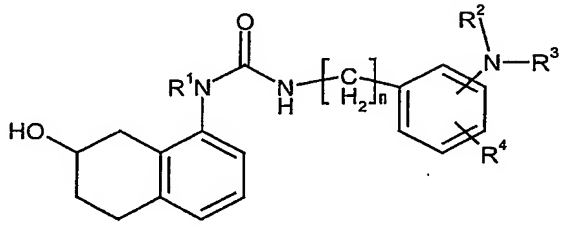
Claims

1. A tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof:



(I)

wherein

n represents an integer of 0 to 6;

R^1 represents hydrogen or C_{1-6} alkyl;

R^2 and R^3 together with the nitrogen atom to which they are attached, form a 3-8 membered saturated heterocyclic ring optionally interrupted by one or two atoms selected from the group consisting of oxygen, sulfur and nitrogen,

wherein

said saturated heterocyclic ring is optionally having substituents selected from the group consisting of halogen, benzyl, hydroxy, carboxy, amino, oxo, aminocarbonyl, C_{1-6} alkoxycarbonyl, and C_{1-6} alkyl optionally substituted by hydroxy, carboxy, C_{1-6} alkoxy, or C_{1-6} alkoxycarbonyl,

or

R^2 represents C_{2-6} alkenyl, C_{2-6} alkynyl, or C_{1-6} alkyl substituted by amino, hydroxy, C_{1-6} alkylamino, or di(C_{1-6} alkyl)amino;

R^3 represents hydrogen, C_{2-6} alkenyl, C_{2-6} alkynyl, or C_{1-6} alkyl optionally substituted by amino, hydroxy, C_{1-6} alkylamino, or di(C_{1-6} alkyl)amino; and

R^4 represents hydrogen halogen, C_{1-6} alkylthio, C_{1-6} alkyl optionally substituted by mono-, di-, or tri- halogen, or C_{1-6} alkoxy optionally substituted by mono-, di-, or tri- halogen.

2. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1,

wherein

n represents an integer of 0 or 1;

R^1 represents hydrogen;

R^2 and R^3 together with the nitrogen atom to which they are attached, form a 5-7 membered saturated heterocyclic ring optionally interrupted by one or two atoms selected from the group consisting of oxygen, and nitrogen,

wherein

said saturated heterocyclic ring is optionally having substituents selected from the group consisting of benzyl, hydroxy, carboxy, oxo, aminocarbonyl, C_{1-6} alkoxycarbonyl, and C_{1-6} alkyl optionally substituted by hydroxy, C_{1-6} alkoxy, or C_{1-6} alkoxycarbonyl,

or

R^2 represents C_{1-6} alkyl substituted by hydroxy, amino, C_{1-6} alkylamino, or di(C_{1-6} alkyl)amino;

R^3 represents hydrogen, C_{1-6} alkyl optionally substituted by hydroxy, amino, C_{1-6} alkylamino, or di(C_{1-6} alkyl)amino; and

R^4 represents hydrogen halogen, C_{1-6} alkyl optionally substituted by mono-, di-, or tri- halogen, or C_{1-6} alkoxy optionally substituted by mono-, di-, or tri- halogen.

3. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1,

wherein

n represents an integer of 0 or 1;

R^1 represents hydrogen;

R^2 and R^3 together with the nitrogen atom to which they are attached, form a pyrrolidinyl optionally substituted by oxo, piperidino optionally substituted by hydroxy, carboxy, aminocarbonyl, C_{1-6} alkoxycarbonyl, or C_{1-6} alkyl optionally substituted by hydroxy, piperazinyl optionally substituted by benzyl, homopiperidino, or morpholinyl,

or

R^2 represents C_{1-6} alkyl substituted by hydroxy, or di(C_{1-6} alkyl)amino;

R^3 represents hydrogen, or C_{1-6} alkyl; and

R^4 represents hydrogen, fluoro, chloro, bromo, C_{1-6} alkyl optionally substituted by mono-, di-, or tri- halogen, or C_{1-6} alkoxy.

4. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1, wherein said tetrahydro-naphthalene derivative of the formula (I) is selected from the group consisting of:

N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[3-piperidin-1-yl-4-(trifluoromethyl)benzyl]urea;
N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[4-pyrrolidin-1-yl-3-(trifluoromethyl)benzyl]urea;
N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[3-pyrrolidin-1-yl-4-(trifluoromethyl)benzyl]urea;
N-[4-azepan-1-yl-3-(trifluoromethyl)benzyl]-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;
N-[3-azepan-1-yl-4-(trifluoromethyl)benzyl]-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;
N-(3-bromo-4-piperidin-1-ylbenzyl)-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;
N-[(7R)-7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl]-N'-[3-pyrrolidin-1-yl-4-(trifluoromethyl)benzyl]urea;
N-[(7S)-7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl]-N'-[3-pyrrolidin-1-yl-4-(trifluoromethyl)benzyl]urea;
N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[4-piperidin-1-yl-3-(trifluoromethyl)benzyl]urea;
ethyl 1-[5-[({[(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)amino]-carbonyl}amino)methyl]-2-(trifluoromethyl)phenyl]piperidine-4-carboxylate;

N-[(7R)-7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl]-N'-[3-morpholin-4-yl-4-(trifluoromethyl)benzyl]urea.

5. A medicament comprising tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a physiologically acceptable salt thereof as claimed in claim 1 in as an active ingredient.

6. The medicament as claimed in claim 5, further comprising one or more pharmaceutically acceptable excipients.

7. The medicament as claimed in claim 5, wherein said tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a physiologically acceptable salt thereof is a VR1 antagonist.

8. The medicament as claimed in claim 5 for the treatment and/or prevention of an urological disorder or disease.

9. The medicament as claimed in claim 8, wherein said urological disorder or disease is urge urinary incontinence or overactive bladder.

10. The medicament as claimed in claim 5 for the treatment and/or prevention of pain.

11. The medicament as claimed in claim 11, wherein said pain is chronic pain, neuropathic pain, postoperative pain, or rheumatoid arthritic pain.

12. The medicament as claimed in claim 5 for the treatment and/or prevention of a disorder or disease related to pain.

13. The medicament as claimed in claim 12, wherein said disorder or disease related to pain is neuralgia, neuropathies, algesia, nerve injury, ischaemia, neurodegeneration, or stroke.

14. The medicament as claimed in claim 5 for the treatment and/or prevention of an inflammatory disorder or disease.

15. The medicament as claimed in claim 14, wherein said inflammatory disorder or disease is asthma or COPD.

16. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of an urological disorder or disease.

17. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of pain.

18. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of an inflammatory disorder or disease.

19. Process for controlling an urological disorder or disease in humans and animals by administration of a VR1-antagonisticly effective amount of at least one compound according to claim 1.

20. Process for controlling pain in humans and animals by administration of a VR1-antagonisticly effective amount of at least one compound according to claim 1.

21. Process for controlling an inflammatory disorder or disease in humans and animals by administration of a VR1-antagonisticly effective amount of at least one compound according to claim 1.